



FirstNet & the Nationwide Public Safety Broadband (NPSBN)

*Prepared for
Michigan Association of Fire Chiefs
2013 Summer Conference*

*MI BB Planning Board Member:
Chief Adam Carroll
Hartland Deerfield Fire Authority*



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Public Safety Broadband: Then & Now

- 2008 – 2009 (**Then:** D-Block)
 - 2008 – Failed PS 700 MHz auction, carriers said “no thanks”
 - 2009 – PS industry lobbying congress for additional 700 MHz spectrum

- 2010 – 2013 (**Now:** FirstNet)
 - 2010-11 – (22) FCC Waivers Granted
 - Feb 2012 – With *Middle Class Tax Relief Act*, Congress:
 - Established governing authority: FirstNet
 - Granted the D-BLOCK, providing additional spectrum needed
 - \$2B in immediate funding
 - \$5B later, includes auction of PS UHF T-Band
 - \$135M in state and local planning grants (SLIGP)



Nationwide Public Safety Broadband Network (NPSBN)



- Public Safety has many visions for the NPSBN
- NPSBN will use a PS version of “4G” LTE
 - LTE – Long Term Evolution



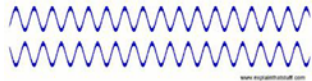
- FirstNet is the authority created by Congress to govern, construct and manage the NPSBN



- Congress allocated over \$7B, \$2B immediately and \$5B later



More on the NPSBN



- **NPSBN will use 20 MHz of dedicated 700 MHz spectrum, which includes the D Block**



- **Applications , Today & Future**



- **\$135M NTIA Planning Grant: State & Local Implementation Grant Program (SLIGP)**



- **Preparing for FirstNet**



- **What's happening in Michigan Public Safety Broadband Program (MPSBP)**



“FirstNet Network” (FNN) Objectives

- FirstNet Network (FNN) will be “Public Safety Grade” so network is available when needed most
- FNN will maintain local management and controls including prioritization and access privileges
- FNN coverage will be extensive, covering jurisdictional, tribal and rural areas currently underserved by broadband.



Public Safety's Vision



- Provide more capabilities than consumer smartphones
- Deliver service even when network is most likely to be down or congested
- Handle intricate and dynamic priority management required by Public Safety operations
- Manage and deploy security and resiliency on all levels required to meet First Responder, mission critical needs
- Allow controls by multiple entities such as national, state, regional, local and tribal agencies
- Address needs for coverage beyond commercial footprints



Public Safety 4G LTE



In Contrast To



Garden Hose = Today's Low Speed Data Options

Low Pressure = Low Bandwidth

Attached to the house = Limited access and coverage

Consumer = Anybody can buy and use

Can't put out a large fire

Fire Hose = Future Public Safety Broadband

High Pressure = High Bandwidth

Mobile = Full access and coverage where needed

Public Safety = Used only by first responders

Designed to put out a large fire

- PS LTE is a “fire hose” compared to today's technologies
- System will be optimized for Public Safety's demanding environments



Meet FirstNet!



Chair



Sam Ginn
*Chairman of the Board
Cellular Executive*

2Y



Tim Bryan
*CEO, National Rural
Telecommunications
Cooperative*

3Y



Chuck Dowd
*Assistant Chief,
NYPD*

2Y



F Craig Farrill
*ACTING CTO
Cellular Executive*

3Y



Paul Fitzgerald
Sheriff, Story County, IA

2Y



Jeffrey Johnson
*Fire Chief, retired; CEO Western
Fire Chiefs Association
Former Chair, State
Interoperability Council, State of
Oregon*

1Y



Bill Keever
Ret. Telecomm Exec

1Y



Kevin McGinnis
Ret. Telecomm Exec

3Y



Ed Reynolds
Ret. Telecomm Exec

2Y



Sue Swenson
*Chair SMLA Subcommittee
Cellular Executive*

1Y



Teri Takai
*DoD CIO
Former MI, CA CIO*

1Y



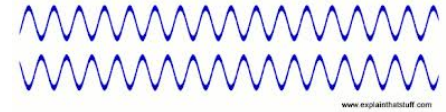
Wellington Webb
*Former Mayor, City of
Denver*

3Y

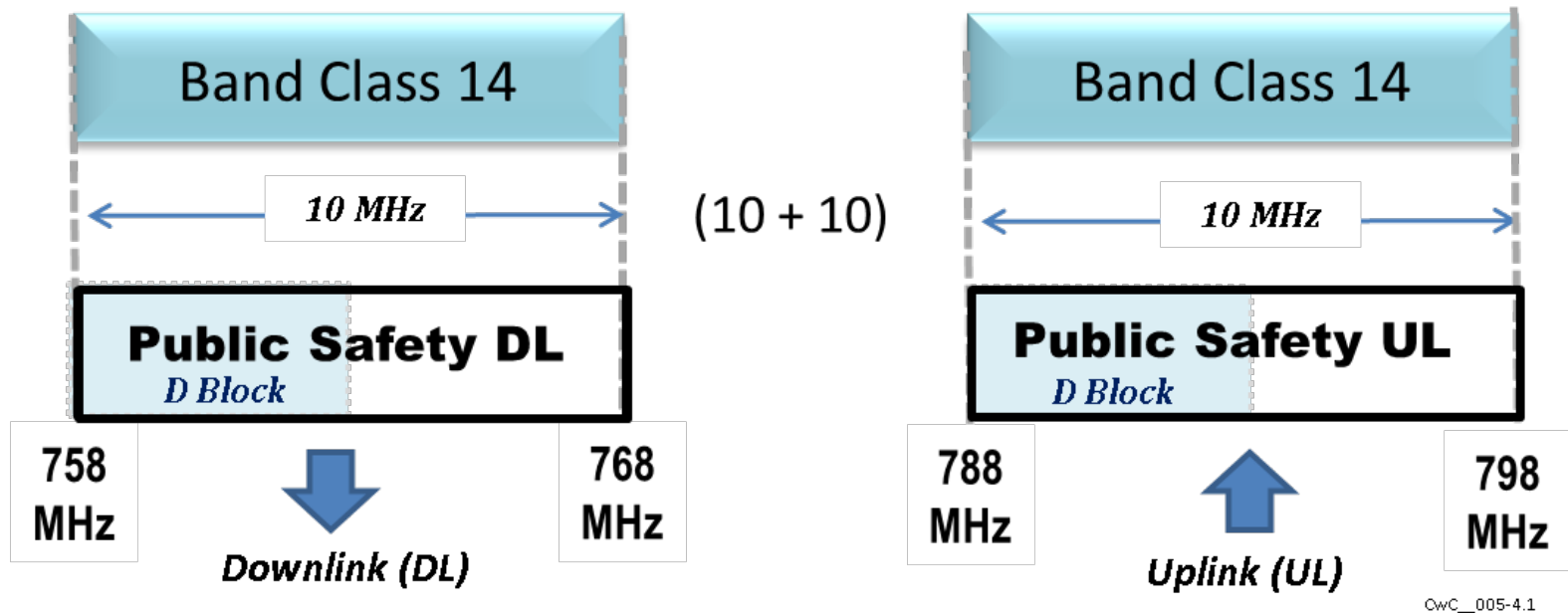


Bill D'Agostino
*FirstNet General
Manager (staff)
Non-Board Member*

Board member terms are noted, ne Year (1Y), two years (2Y) or three years (3Y). Board originally appointed in August 2012.



PS 700 MHz SPECTRUM



- The Public Safety Spectrum has a nationwide FCC license held by FirstNet
- Uses two paired (UL/DL) 10 MHz blocks of spectrum ("10 + 10")
 - "D-Block" is historical reference to lower 5 MHz allocated by Congress in Feb 2012 legislation
- This spectrum is properly referred to as "Band Class 14" (BC14), which is a global 3GPP LTE designation



Applications, Today & Future



- Internet Access
 - Mobile VPN
 - Status/Information Splash Page
 - SMS/MMS
 - Streaming Video
 - Auditable DB Access
 - Video transfer
 - Gateways for PS LTE PTT and P25 connectivity
 - Silent, CAD-based dispatch
 - Electronic pre-plans
 - HazMat data
 - Telemetry
 - Intelligent biometrics
 - AVL, Field-based server apps
 - Location-based services
 - NIMS ICS-based services
- intelligent fireground
smart accessories
gunshot detection
smart micro cameras
swipe transfers
- Successful deployment will require more application coordination than is currently in place
 - Many applications will need to be optimized for PS LTE
 - All will require security equal to or better than CJIS and HIPAA defined requirements



SLIG-P Grant Program Overview

NTIA National Allocation

- Award period is 3 years
- Only states and territories can apply
- Total allocated 121.5 M
- Formula-based, not competitive
- Each state given flat \$500K PLUS
- Allocation by population and land mass

State of Michigan

- Max Federal Share: \$3,347,673*
 - Req'd Match (20%): \$837,574
 - Match can include In-Kind
- Total Application Amt.: \$4,184,591

**Amounts above reflect adjustments for 2013 sequester (~3%).*

Expected Deliverables

- Establish **governance structure** to consult with FirstNet
- Ensure **local and tribal representation** and participation in FirstNet consult. process
- **Education & Outreach** on PS Broadband network among local, tribal and PS users
- **Identify potential PS users** for PS Broadband network
- **Develop MOAs** to facilitate use of existing infrastructure with private sector entities
- **Staffing Plans** that include local and tribal representation **for governance** and preparation of **data collection**
- Comprehensive plan as part of or complementary to SCIP to **describe PS needs** for nationwide network



Preparing for FirstNet



- *Learn more about FirstNet and the NPSBN!*
- Think about your future coverage and operational needs
- Identify assets which could be leveraged by NPSBN
- Carefully examine investments in commercial or private PS data systems
- Make sure new purchases of 4G broadband devices are capable or upgradeable to Band Class 14 (BC14)
- Consider that FirstNet may have cellular voice when negotiating long term cellular contracts



Michigan's Public Safety Broadband Program (MPSBP)

- Michigan delegation participated in FirstNet Regional Meeting.
- Established Michigan Interoperability Broadband Planning Board, which is Michigan's Statewide Interoperability Governance Board (SIGB) which will govern and lead the MPSBP.
- Submitted application for a \$4.1M State and Local Implementation Grant Program (SLIGP) to support initial consultation and planning.
- Supported early consultations with FirstNet and overall program planning.
- Initial outreach and education efforts.
- Involvement and leadership positions with national organizations working on the PSBN, such as the APCO Broadband Committee
- Coordination with other states' PSBN teams, especially in the Midwest region.

July 2013



How to Learn More

- Check out the soft launch of our new web pages:
 - <http://www.michigan.gov/mpscs>
- Sign up for MPSBP Updates: MPSB-info@michigan.gov
 - Weekly news updates and/or monthly program update
- Follow us on Twitter™ @MPSCS 
- *Contact Us!*



Thank You!

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